

REMARKS

Claims 1-9 and 11-21 are pending, and are amended to more particularly state and distinctly claim the subject matter that Applicant regards as his invention, and to put the language in conformance with U.S. patent practice. Claim 10 is cancelled without prejudice as redundant over the amended claims.

The specification is amended to correct inadvertent errors in the Colour Indices provided for various commercially available pigments.

None of the amendments constitutes new matter.

The claims are rejected as unenabled and/or indefinite, and the specification is objected to. For reasons to be set forth in greater detail below, it is requested that the rejections be removed and that the claims be allowed to issue.

1. **Claims 12, 20 And 21 Are Enabled**

Claims 12, 20 and 21 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not enabled by the specification.

Regarding claim 12, the Examiner states that although Applicant claims the step of partially replacing the titanium in titanium oxide or the magnesium in the spinelle used as colorant, it is not explained how to practice these steps in the specification. Rather, notes the Examiner, commercially available pigments are used.

In response, Applicant asserts that methods for replacing titanium in titanium dioxide and magnesium in spinelle are well known in the art, where such replacement is known as "doping" (see, for example, the specification at page 5 lines 7-27). As the Examiner has acknowledged, such colorants are commercially available (see,

for example, the specification at page 7 lines 21-25, describing examined Sicotan and Sicopal CPI pigments), indicating that a person skilled in the art would be able to prepare them. Such arguments notwithstanding, Applicant has amended claim 12 so that it no longer requires an active step of "replacing" components of the colorant, but merely requires that the colorants used in subsequent steps contain such replacements. Applicant has added the step of preparing a cellulose solution comprising the colorant and cellulose dissolved in an aqueous tertiary amine oxide, where the colorant does not reduce the rise temperature of the cellulose solution by more than 10°C. Therefore the rejection of Claim 12 should be removed.

Regarding Claim 20, the Examiner contends that the claim requires use of titanium dioxide as a colorant, but that "[t]here is no basis in the specification for using titanium dioxide except in the discussion of the prior art."

Applicant asserts that the specification amply supports the use of titanium oxide-based colorants. Claim 20 has been amended to require that in the titanium oxide, titanium has been partially replaced by one or more heavy metals, thereby obviating the basis for the rejection, which should be removed.

Similarly, Claim 21 is rejected for lack of enablement of the use of titanium oxide or spinelle (without replacements) in the claimed process. Claim 21 has been amended to require that titanium in the titanium oxide is partially replaced and that magnesium in the spinelle is partially or completely replaced, thereby obviating the basis for the rejection, which should be removed.

2. **Claims 1-10, 12-15, 20 And 21 Are Enabled**

Claims 1-10, 12-15, 20 and 21 are rejected under 35 U.S.C. §112 as lacking enablement. The Examiner contends that while the specification is "enabling for a process and product wherein the cellulose molded body is produced by precipitation from a solvent comprising N-methylmorpholine-N-oxide and spun [it] does not reasonably provide enablement for the full scope of the products and processes as claimed."

While traversing the rejection, Applicant has amended the claims to be limited to processes that dissolve cellulose in aqueous tertiary amine oxides (of which N-methylmorpholine-N-oxide is but one example) and to cellulosic molded bodies produced by such processes, without prejudice to the prosecution of subject matter cancelled by amendment in other patent applications. The specification fully supports the use of aqueous tertiary amine oxides as a class of agents (see, for example, page 4 lines 11-16 and page 6 line 27 through page 7 line 4) so that the claims need not be restricted to N-methylmorpholine-N-oxide. Applicant accordingly requests that the rejection be removed.

3. **The Subject Matter Of The Claims Is Adequately Defined**

Claims 1-10, 12-15, 20 and 21 are rejected under 35 U.S.C. §112, second paragraph, as failing to set forth the subject matter which Applicant regards as his invention. The basis for the rejection is the Examiner's contention that the specification is directed toward cellulose produced by the amine oxide process, but the claims are not.

The claims have been amended without prejudice (see *supra*) to relate to cellulose produced by the amine oxide process, thereby removing the basis for the rejection.

4. **The Claims Are Not Indefinite**

Claims 1-19 and 21 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for the recitations "by at most 10°C" and "by at most 5°C." The Examiner finds these terms to be vague and indefinite since they include the condition where there is no change in temperature.

Applicant wishes to point out that the claims are intended to cover the condition in which there is no change in temperature. The problem addressed by the present invention is that it was hitherto believed that pigments may disrupt the thermal stability of cellulose solutions (see for example the specification at page 3 lines 23-27). As illustrated in Example 2 at page 8 line 26 through page 9 line 11 and Figure 2, bismuth vanadate (pigment F) and copper phthalocyanine (pigment G) "catalyze the thermal degradation of the spinning mass," as manifested by a reduction in the rise temperature of 15°C and 16°C, respectively (the rise temperature is the "temperature of the heating jacket at which the temperature of the spinning mass exceeds the temperature of the heating jacket by 10°C" (in the specification at page 8 lines 19-23)). In contrast, the present invention provides for the use of colorants which "do not impair the thermal stability of the amine-oxide cellulose solution" (in the specification at page 4 lines 23-26). The difference can be appreciated by contrasting the curves of Figures 1 and 2. The ordinate depicts the temperature difference between cellulose solution and heating jacket, and the

abscissa indicates the temperature of the heating jacket (in the specification at page 8 lines 15-18), and curve E represents cellulose solution without colorant. It can be readily appreciated that the additions of colorants A-D, depicted in Figure 1, do not affect the thermal stability of the cellulose solution (in the specification at page 8 lines 24-25), as reflected by their clustering around control curve E. This is not the case for the addition of pigments F and G, as illustrated by Figure 2.

Therefore, the specification teaches that it is *desirable* that the pigments of the invention not effect the thermal stability of the cellulose solution or affect it within certain parameters – *i.e.*, where the reduction in rise temperature is at most 5°C or 10°C. As no effect is desirable, a change of zero degrees is contemplated. To more explicitly include the potential value of zero, the claims have been amended to provide that the addition of colorant "does not reduce the rise temperature of the cellulose solution in a tertiary amine oxide by more than " 5°C or 10°C.

Accordingly, Applicant requests that the rejection be withdrawn.

5. The Color Indices Set Forth In The Specification

The Examiner has objected to the specification because on page 6, the list of inorganic pigments contains several references to Colour Index Pigment Yellow 24/77310, attributing to the same number different trade names and a composition of chromium/antimony, which the Examiner states is incorrect, indicating that the index number is more properly applied to Pigment Brown 24.

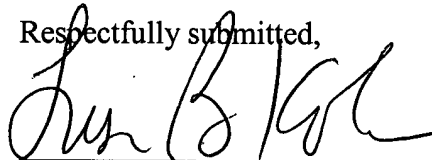
Applicant has amended the specification to refer to CI Pigment Brown 24/77310, rather than Yellow 24/77310, thereby removing the basis for the objection.

6. **Conclusion**

For all the foregoing reasons, it is asserted that the claims are patentable.

It is requested that the rejections be withdrawn and that the claims be allowed to issue.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Lisa B. Kole', written over a horizontal line.

Lisa B. Kole

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